

MISSOURI DEPARTMENT OF NATURAL RESOURCES

In the Matter of:

**The Doe Run Resources Corporation
dba The Doe Run Company
Herculaneum Smelter
881 Main Street
Herculaneum, Missouri 63048**

**Proceeding Under the Missouri
Hazardous Waste Management Law
Section 260.410 and 260.510, RSMo**

The Missouri Air Conservation Law Section 643.090(2), RSMo

and

The Missouri Clean Water Law

Chapter 644.056, RSMo

ORDER TO ABATE AND CEASE AND DESIST VIOLATIONS

**TO: Registered Agent for The Doe Run Company
C.T Corporation System
120 S. Central Avenue
Clayton, Missouri 63105**

Violations of Hazardous Waste Management Law - Pursuant to Section 260.410, RSMo, you are hereby notified that on this date the Missouri Department of Natural Resources (hereinafter MDNR) is issuing this Order to Abate releases of hazardous substances and hazardous wastes under the Missouri Hazardous Waste Management Law, Sections 260.350 through 260.575, RSMo, and its implementing regulations as provided herein. The MDNR has issued this Order to prevent exposure of residents of the City of Herculaneum to hazardous substances transported by trucks under contract with the facility and hazardous waste released during transport.

Failure to comply with the Missouri Hazardous Waste Management Law and Regulations and this Order within the time specified herein will result in the MDNR

initiating judicial action for injunctive relief, assessment of penalties not to exceed ten thousand dollars (\$10,000.00) per day for each day or part thereof of each noncompliance, and any other applicable remedy available pursuant to Section 260.425, RSMo, or otherwise available by law. Compliance with this Order does not preclude the MDNR from pursuing penalties for the violations cited in this Order.

In addition to the authorities and remedies noted above, the MDNR may take actions necessary to cleanup a hazardous substance release if the person having control over the release fails to take reasonable actions required by the director pursuant to Section 260.510, RSMo. Further, pursuant to Section 260.530, RSMo, the person having control over the hazardous substance is strictly liable for cleanup costs incurred by the state and may be subject to punitive damages not to exceed triple the cleanup costs incurred by the state.

Violations of Air Conservation Law - Pursuant to Section 643.090(2), RSMo, of Missouri's Air Conservation Law you are hereby notified that on this date the MDNR director is issuing this Order to Cease and Desist Violations set forth in the Order. Such Orders are issued when the MDNR director determines that any person is discharging or causing to be discharged into the ambient air, any air contaminant that constitutes a clear and present danger to the public health or the environment.

Failure to comply with the Missouri Air Conservation Law and this Order may result in the initiation of civil action in any court of competent jurisdiction for injunctive relief to prevent any further violations or for the assessment of a penalty not to exceed \$10,000 for each violation per day for each day, or part thereof, the violation continues to occur, or both, as the court may deem proper.

Violations of Missouri Clean Water Law – Pursuant to Sections 644.051(1) and 644.076.1, RSMo of Missouri's Clean Water law you are hereby notified that Doe Run has placed or caused or permitted to be placed a water contaminant (the fugitive dust) in a location where it is reasonably certain to cause pollution of waters of the state. Litigation may occur without further administrative notice if there is not compliance with the requirements of this Order.

SECTION I. FINDINGS OF FACT

1. The Doe Run Resources Corporation (Doe Run) is a New York corporation, with one of its primary facilities located at 881 Main Street, Herculaneum, Jefferson County, Missouri 63048 .
2. The Doe Run Company is a fictitious name filed with the Missouri Secretary of State, the owner of which is The Doe Run Resources Corporation.
3. Doe Run operates a primary lead smelter (Doe Run smelter) at 881 Main Street in Herculaneum.
4. As part of its operations, Doe Run smelter receives lead concentrate from mining and milling operations located in the Missouri counties of Iron, Reynolds and Washington. Doe Run smelter also receives hazardous materials from offsite third parties for use and reuse at the Doe Run smelter.
5. For the last two or three years, the primary mode of transporting lead concentrate to Doe Run's smelter has been by trucks.
6. Trucks enter and exit the City of Herculaneum on their way to and from Doe Run's smelter through public streets.
7. On August 21, 2001, MDNR personnel responded to citizens' complaints related to dust on the streets of Herculaneum.
8. MDNR personnel collected a sample of road dust at the northwest corner of Broad Street and Station Street in Herculaneum on August 21, 2001. MDNR personnel observed that road dust had collected in long narrow piles along the street curbs and shoulders. The sample of road dust was dark grey and metallic in appearance.
9. The sample (# 0139276) was collected and transferred under chain-of-custody to MDNR's Environmental Services Program laboratory for analysis. Sample #0139276 was analyzed for total arsenic, total cadmium, total nickel, total lead, and total zinc. The laboratory analyses revealed 300,000 milligrams per kilogram of lead, 24,800 milligrams per kilogram of zinc, 598 milligrams per kilogram of cadmium, 519 milligrams per kilogram of nickel, and 138 milligrams per kilogram of arsenic. **Copies of the sample result analyses are included**

as Exhibit 1 and are incorporated herein by this reference.

10. The U.S. Environmental Protection Agency (EPA), with assistance from MDNR, performed additional screening of roadways, nearby road shoulders, and adjacent properties on August 30, 2001 using an x-ray fluorescence meter. Sampling revealed concentrations of lead ranging from approximately 300,000 to 30,000 milligrams per kilogram located primarily along hauling routes and approximately 50 yards down intersecting side streets. **A copy of the EPA report is attached hereto as Exhibit 2 and is incorporated herein by this reference.**
11. Ambient air quality data from Herculaneum monitors for the calendar quarter ending June 30, 2001 indicates increasing ambient concentrations of lead at several monitors, compared with data from earlier quarters. **A copy of the quality assured ambient lead data for the quarter ending June 30, 2001 is attached hereto as Exhibit 3 and is incorporated herein by this reference.**
12. On September 17, 2001, MDNR staff observed fugitive dust from a highly contaminated area (i.e., an un-fenced area along the south side of the plant between the truck scales and the Mississippi River) blowing onto city property. MDNR staff issued a Notice of Violation (NOV) #6313 on September 20, 2001 to Doe Run for the violation related to this observation. **A copy of the NOV is attached as Exhibit 4.**
13. Through discussions with representatives of Doe Run, observations, and review of the field screening and laboratory analyses results noted in items eight (8) through twelve (12) above, MDNR and EPA staff concluded that the extremely high level of lead contamination can be attributed to lead concentrate spilled from full and/or mostly empty trucks hauling lead concentrate that entered and/or exited the Doe Run smelter along primary and secondary hauling routes. Due to conditions at the facility, any and all vehicles exiting the facility may be transporting lead-contaminated materials from the site. The primary hauling routes in Herculaneum from the facility west to U.S. Highway 61/67 include Station Street, Brown Street, and Joachim Avenue. The secondary hauling

- routes from the facility north and west to U.S. Highway 61/67 include Main Street and Joachim Avenue. MDNR's sample was collected along the main haul route.
14. On or about August 31, 2001, EPA notified Doe Run to immediately undertake actions to clean the hauling routes and facilities that may contribute to dispersal of hazardous substances (e.g. extremely elevated concentrations of lead), throughout the streets of Herculaneum. **A copy of EPA's letter to Doe Run is included as Exhibit 5 and is incorporated herein by this reference.**
 15. The fugitive dust from the Doe Run smelter found in the streets of Herculaneum is a water contaminant as that term is defined in Section 644.016(22), RSMo.
 16. Joaquim Creek and the Mississippi River are waters of the state as that term is defined in Section 644.016(25), RSMo.
 17. On or about September 1, 2001, Doe Run undertook certain activities in response to EPA's request of August 31, 2001.
 18. On or about September 17, 2001, EPA and the MDNR notified Doe Run that they were invoking Section XXV of the Administrative Order on Consent for Doe Run's lead smelter in Herculaneum, Missouri, docket number RCRA-7-2000-0018, CERCLA7-2000-0029. The letter requires expedited assessment of residential yards, play areas and high-child use areas in Herculaneum as well as remediation of residential yards where children with elevated blood lead levels reside. **A copy of EPA's letter to Doe Run is included as Exhibit 6 and is incorporated herein by this reference.**
 19. On or about September 24, 2001, MDNR received a letter from the Missouri Department of Health concluding that "risks to the public's health, especially pregnant women and children through age six, are clear and present and are an imminent and substantial endangerment" as a result of concentrations of lead along hauling routes, intersecting streets, and adjacent properties. **A copy of the letter from the Missouri Department of Health is included as Exhibit 7 and is incorporated herein by reference.**
 20. Sample results were received from the EPA on September 20, 2001 indicating that material collected on September 5, 2001 from four out of five sample

locations exceeded the statutory definition of hazardous waste based on the characteristic of toxicity for lead. **A copy of the results and location map is included as Exhibit 8 and is incorporated herein by reference.**

SECTION II. STATEMENT OF VIOLATIONS

Items one and two below are violations of Missouri's Hazardous Waste Management Law, Section 260.350, et seq. RSMo and Title 10 Division 25 of the Code of State Regulations adopted pursuant to Section 260.370, RSMo. (Federal Regulations cited are incorporated by reference in the Missouri regulations.)

1. Doe Run has a hazardous substance emergency pursuant to Section 260.510 RSMo. The emergency is in regards to the extremely high level of lead contamination that has been recently discovered in close proximity to the hauling routes identified herein. Current information indicates that these extremely high levels of lead can be attributed to lead concentrate spilled from full and/or mostly empty trucks hauling lead concentrate that entered and/or exited the Doe Run smelter along primary and secondary hauling routes. The primary hauling routes in Herculaneum from the facility west to U.S. Highway 61/67 include Station Street, Brown Street, and Joachim Avenue. The secondary hauling routes from the facility north and west to U.S. Highway 61/67 include Main Street and Joachim Avenue.
2. Doe Run has operated as a disposal facility without a permit in violation of Section 260.390.1(1) RSMo. Based on field screening and laboratory analytical results noted in item twenty (20) in Section II of this Order, Doe Run has generated a hazardous waste. Based on observations referenced in items eight (8) through ten (10), twelve (12), thirteen (13) and twenty (20) in Section II of this Order, Doe Run has disposed of hazardous waste into the environment. Doe Run does not have a permit for this disposal activity.

The following is a violation of Missouri's Air Conservation Law pursuant to Section 643.090(2), RSMo.

Doe Run has discharged an air contaminant source (the fugitive dust) directly or indirectly into the ambient air, and such discharge constitutes a clear and present danger to the public health, public welfare and the environment.

The following is a violation of Missouri's Clean Water Law pursuant to Section 644.056, RSMo.

Doe Run has placed or caused or permitted to be placed a water contaminant (the fugitive dust) in a location where it is reasonably certain to cause pollution of waters of the state in violation of Sections 644.051(1) and 644.076.1, RSMo.

SECTION III. CORRECTIVE ACTIONS REQUIRED

THEREFORE, PURSUANT TO SECTION 260.410, RSMo, SECTION 643.090(2) AND 644.056, RSMo IT IS HEREBY ORDERED:

1. Doe Run shall immediately cease all activities that cause fugitive dust to leave the property boundaries of the facility. Beginning immediately, Doe Run shall ensure that all trucks and other vehicles leaving the facility, including the unfenced area along the south side of the plant between the truck scales and the Mississippi River, extending to the slag storage area, are clean and free of lead concentrate and slag dust. Doe Run shall continue current truck washing procedures, including tire washing, under-carriage washing, and visual inspection of every vehicle before it leaves the facility premises, and shall take all other steps necessary to ensure every vehicle is free of material which could cause fugitive emissions or contaminate roads. The current truck washing procedures shall be expanded to include bed washing of concentrate trucks and wheel and under-carriage washing of any and all vehicles leaving the plant area and traveling on public streets. Vehicle cleaning shall be conducted in such a location that recontamination will not occur by driving through contaminated areas after washing/cleaning. If employee parking lots are contaminated, employee vehicles shall be included in the vehicle-washing program within three (3) days of MDNR's notice to proceed and will continue until parking lots are

determined by MDNR to be clean. In addition to these actions, Doe Run shall take any additional actions necessary to immediately eliminate fugitive dust emissions from vehicles traveling to and from the facility that cause fugitive dust to be deposited, discharged, emitted, spilled or released from vehicles traveling to and from the Doe Run smelter.

2. Within seven (7) days of receipt of this order, Doe Run shall complete cleaning of all hauling routes, the entire extent of contamination on streets that intersect hauling routes, and other areas inside or adjacent to the facility that are open to vehicular traffic. These roads shall be cleaned to concentrations MDNR determines to be equivalent to non-hauling route concentrations in Herculaneum and shall be maintained in a clean condition. If road dust concentrations are not substantially equivalent to non-hauling route concentrations, within seven (7) days of Doe Run's receipt of such results, it shall consult with the City of Herculaneum to develop a plan for repaving the hauling routes and the intersecting streets where contamination exists. The plan shall be submitted to MDNR within twenty-one (21) days of receipt of the results. Re-paving must begin within seven (7) days of receipt of MDNR's written approval of the plan and must be completed within 60 days of MDNR's notice to proceed. In addition, within three (3) days of receipt of this Order Doe Run shall sample all employee parking lots to determine whether parking lots should be included in the road-cleaning program. Results of parking lot sampling are due to MDNR within seven (7) days of receipt of this Order. If contamination is discovered in employee parking lots, they shall be cleaned to concentrations MDNR determines to be equivalent to non-hauling route concentrations in Herculaneum. Doe Run shall clean those parking lots within seven (7) days of MDNR's notice to proceed and maintain all areas in a clean condition.
3. Within ten (10) days of receipt of this Order, Doe Run shall submit a detailed plan to MDNR for concentrate delivery to the Herculaneum smelter that does not involve the use of open dump trucks, either tarped or untarped. The plan shall provide for routine inspections, performance standards, and quality control

measures to ensure that lead concentrate or other hazardous substances are not deposited, emitted, released, or spilled into the environment during any part of the transport process. The plan shall include a schedule with milestones that provides for full implementation within forty-five (45) days of the date of this Order. Within forty-five (45) days of receipt of this Order, Doe Run shall cease transport of lead concentrate or other hazardous substances along the public streets of Herculaneum using open dump trucks (either tarped or untarped).

4. The EPA plans to assess indoor dust contamination in residential properties in Herculaneum with lead contaminated soil in excess of 10,000 parts per million (ppm) and also properties where children with elevated blood lead levels reside. MDNR and EPA will develop a plan to characterize and remediate the remaining properties where elevated lead concentrations and indoor dust have occurred as a result of deposits, emissions, releases or spills of lead concentrate or other hazardous substance from the Doe Run Smelter. Doe Run shall be required to fund indoor lead-contaminated residential dust characterization and remediation where necessary.
5. Doe Run shall not implement the plan required in Corrective Action three (3) above without review and written approval by MDNR. MDNR will consider and must pre-approve modifications to the plan to accommodate unusual or extreme circumstances only if Doe Run demonstrates that there will be no adverse impact to public health and the environment as a result of the modification.
6. Doe Run shall comply with the additional work conditions of the September 17, 2001, letter from EPA and MDNR.
7. Doe Run shall ensure that all waste water from the vehicle washing operations is contained and treated according to all applicable requirements of the Missouri Clean Water Law, including its implementing regulations.
8. Doe Run shall immediately cease transport of lead concentrate and other hazardous substances along the public streets of Herculaneum if any of the corrective actions required under this Order are not taken within the timeframes prescribed herein.

SECTION IV. AGENCY APPROVALS/SUBMITTALS

The MDNR may approve, disapprove, require revisions or modify any document, plan or submission required under this Order. If MDNR requires revisions, Doe Run shall submit a revised version of the submission within seven (7) days of receipt of MDNR's notification of the required revisions. The MDNR may, at its sole discretion, unilaterally modify a submission upon MDNR's first review or after Doe Run has revised and resubmitted a document. Once approved, modified by MDNR, or approved with modifications, Doe Run shall commence work and implement any approved plan in accordance with the schedule and provisions contained therein. Any MDNR-approved plan, specification, or schedule, shall, upon approval, be incorporated into and shall become enforceable under, this Order. Prior to this written approval, no plan, specification or schedule shall be construed as approved and final. Oral advice, suggestions, or comments given by MDNR representatives will not constitute an official approval, nor shall any oral approval or oral assurance of approval be considered binding.

SECTION V. MODIFICATIONS

Minor modifications to any plan or schedule may be made in writing by MDNR's project manager. The remainder of the Order, or any portion of the Order, may only be modified in writing by the MDNR Director.

SECTION VI. ADDITIONAL WORK

If MDNR determines that additional work actions not included in an approved plan are necessary to fulfill Doe Run's obligations under this Order, MDNR will notify Doe Run of that determination. Doe Run shall confirm its willingness to perform the additional work in writing to MDNR within fourteen (14) days of receipt of the MDNR request. If MDNR determines that additional work not included in an approved plan are necessary to address an emergency condition,

Doe Run shall confirm its willingness to perform the additional work in writing to MDNR within seven (7) days of receipt of the MDNR request. Doe Run shall implement the additional tasks that MDNR determines are necessary. Within seven (7) days of receipt of notice from MDNR that additional work is necessary to comply with the terms of this Order, Doe Run shall submit for approval by MDNR a work plan for the additional work. Upon MDNR's approval of the work plan or MDNR's modification or development of the work plan pursuant to Section IV (Agency Approval/Submittal) of this Order, Doe Run shall implement the plan for additional work in accordance with the provisions and schedules contained therein. MDNR reserves the right to conduct the work itself at any point, to seek reimbursement from Doe Run, and/or to seek any other appropriate relief.


SECTION VI. CORRESPONDENCE AND DOCUMENTATION

Correspondence or documentation with regard to conditions outlined in this Abatement Order shall be directed to:

Mr. Dave Mosby
Superfund Section
Hazardous Waste Program
Department of Natural Resources
P.O. Box 176
Jefferson City, MO 65102-0176

SECTION VI. SIGNATURE AUTHORITY

DEPARTMENT OF NATURAL RESOURCES



Stephen Mahfood, Director
Department of Natural Resources

Dated this 25th day of SEPTEMBER, 2001.